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OF PLANT PROTECTION

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DISCOVERIES AND CURRENT EVENTS *

Eritrea: Locusts (1).

In the western lowlands on 1 November, 1934, a dense swarm of *Locusta migratoria migratorioides*, of a reddish colour, coming from the West passed over Sabderat towards the East.

On the 25th a small swarm was reported at Aicota, flying from West to East.

No damage has been done to crops.

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During the month of December, 1934 neither eggs, hatching of hoppers, nor swarms of locusts have been reported throughout the whole Colony.

United States of America: Entomological Records (2).

The following are the more important entomological records in the United States for October, 1934:

Heavy migrations of the beet webworm (*Loxostege sticticalis* L.) occurred during the early part of the month in Nebraska and Kansas. The migrating worms were so numerous that when their path led across a railroad they interfered with the movement of freight trains. They did very serious damage to a variety of crops in their migration.

The Japanese beetle (*Popillia japonica* Newm.) was found this year in St. Louis, Mo., Indianapolis, Ind., and Charlottesville, Va.

In general, infestations by the hessian fly (*Phytophaga destructor* Say) in the States where surveys have been made were below normal. In Kansas, however, infestations seemed heavier than last year.

Large numbers of chinch bugs (*Blissus leucopterus* Say) were entering winter quarters in Illinois and Iowa.

The European corn borer (*Pyrausta nubilalis* Hbn.) has been reported as now occupying the entire strip of coast from Maine to Cape Charles, on the Eastern Shore of Virginia.

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* Under this and the next heading the countries are arranged in French alphabetical order.

(1) Communication from the official correspondent of the Institute, Dr. ROLANDO GUIDOTTI, Chief of the Agricultural Bureau of Eritrea, transmitted to the Institute by the Government of the Colony.

(2) Communication from Mr. LEE A. STRONG, Chief of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington, D. C.

The corn ear worm (*Heliothis obsoleta* Fab.) was reported as generally abundant and destructive throughout the greater part of the country. During October it was extremely destructive to tomato fruit in Utah and California.

The leafhopper *Cicadula maidis* De Long and Wolcott, a pest of sugar-cane in the West Indies, which was found last year in San Bernardino County, Calif., was discovered this October in Los Angeles County. It is now known to be present in the eight southern counties of California from Kern and Santa Barbara to the Mexican border.

Serious damage to soybeans by the velvetbean caterpillar (*Anticarsia gemmatilis* Hbn.) was reported from Louisiana, North Carolina, and South Carolina.

The flat-headed apple tree borer (*Chrysobothris femorata* Oliv.) was reported as seriously damaging fruit and shade trees in Kansas and Illinois.

A bostrichid beetle, *Stephanopachys pacificus* Csy., was reported for the first time as a pest of apples in Washington State. The adults were eating holes in the fruit.

A large green June beetle, *Cotinis texana* Csy., was collected late in September in southern California, apparently the first record of this species from that State.

The southern green stink bug (*Nezara viridula* L.) was reported as unusually abundant in the Gulf region from Florida to Louisiana.

The tomato crop in southern California has been severely damaged by the tomato pin worm (*Gnorimoschema lycopersicella* Busck).

The banded cucumber beetle (*Diabrotica balteata* Lec.) was quite generally reported in the Gulf region and the South Atlantic States from Mississippi to South Carolina. Reports of considerable damage by this insect were also received from southern California.

The first record of serious damage by the bean looper (*Autographa egena* Guen.) was received from Orange County, Calif., late in September.

Sugar beets were seriously damaged by curly top caused by the beet leafhopper (*Eutettix tenellus* Bak.) throughout Utah and the western slope of Colorado.

Heavy defoliation by a species of *Ellopia* was observed in the State forest near Warwick, Mass.

Southern Rhodesia: New Records of Fungus Diseases for the Year Ending May 31st., 1934 (1).

Locusts.

Numerous cases of diseases among swarms of the Red Locust (*Nomadacris septemfasciata* Serv.) have been reported during April, May and June, 1934; in certain instances large swarms appear to have been completely killed out. Num-

(1) Communication from the official correspondent of the Institute, Mr. J. C. F. Hopkins, D. Sc. (Lond.), A. I. C. T. A., Senior Plant Pathologist, Department of Agriculture, Salisbury, Southern Rhodesia.

bers of individuals have been examined from time to time and found to be attacked by *Empusa grylli*. The fungus corresponds with the description given by Doidge in *Trans. Roy. Soc. South Africa*, ix, 1, 1921; conidia, conidiophores, resting spores and internal mycelium being quite typical. Many individual insects affected by the disease failed to show conidiophores and conidia, but upon dissection the gut was found to contain mycelium and resting spores. The latter were spherical, with thick double walls, regular in size and shape. The conidia averaged 38 × 30 μ in diameter and the resting spores 30.5 μ. The club-shaped conidiophores were irregular in size.

Other fungi, not yet determined, have been found associated with disease in locusts. One has been grown in artificial culture.

New records of plant diseases are:—

Antirrhinum sp. . . .	Collar Rot	*Rhizoctonia solani* Kühn.
Arachis hypogaea . . .	Pod Rot	*Rhizopus nigricans* Ehrenb.
Citrus aurantium (Records supplied by G. R. Bates)	Brown Rot	*Phytophthora citrophthora* (Sm. and Sm.) Leonian.
	Centre Rot	*Fusarium solani* (Mart.) App. & Wr.
	Fruit Rot	*Trichoderma lignorum* Tode.
	Stem-end Rot	*Diaporthe citri* Wolf.
	» » »	*Alternaria citri* Pierce.
	» » »	*Fusarium diversisporum* Sherb. affin.
	» » »	*F. solani* (Mart.) App. & Wr.
	» » »	*F. moniliforme* Sheld. (var. *erumpens* Wr. & Rg. affin.).
	» » »	*F. oxysporum* Schl. f. 1 Wr.
	Stylar-end Rot	*F. lateritium* Nees (near var. *majus* Wr.).
	» » »	*F. orthoceras* App. & Wr.
	» » »	*F. oxysporum* Schl.
Dahlia sp.	Leaf Spot.	*Cercospora grandissima* Rangel.
Fragaria (cultivated) .	Black Root Rot. . . .	*Rhizoctonia solani* Kühn and other fungi.
	Hard Fruit Rot . . .	*Rhizoctonia solani* Kühn.
	Mildew	*Oidium* only. (? *Sphaerotheca humuli* (Fries) Burr.).
	Mouldy Fruit Rot . .	*Rhizopus nigricans* Ehrenb.
	Storage Rot	*Cladosporium herbarum* (Pers.) Link affin.
Gerbera jamesonii	White Blister	*Cystopus cubicus* de By.

Luffa cylindrica . . .	Mildew	*Erysiphe cichoracearum* DC. (*Oidium* only).
Nicotiana tabacum . .	Mould	*Aspergillus sulphureus* (Fres.) Thom. & Church.
	Stem Rot.	*Rhizoctonia solani* Kühn.
Panicum maximum . .	Ear Fungus	*Cerebella cynodontis* Syd. affin.
Petroselinum sativum .	Leaf Spot	*Septoria petroselini* Desm.
Portulaca oleracea . . .	White Blister	*Albugo portulacae* (DC.) Kze.
Rosa sp.	Anthracnose	*Sphaceloma rosarum* (Passer.) Jenk.
Senecio latifolius . . .	Mildew	*Oidium* only. (? *Erysiphe cichoracearum* DC.).
Sorghum vulgare . . .	Smut	*Sphacelotheca sorghi* (Link) Clint.
Vicia faba	Rust	*Uromyces fabae* (Pers.) de By.
Vigna catjang	Root Rot	*Rhizopus nigricans* Ehrenb.
Vigna triloba	Rust	*Aecidium vignae* Cke.

Southern Rhodesia: Locust Invasion, 1932-1934 (1).

Monthly Report No. 23. October, 1934.

The locust position during October has become increasingly menacing, swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.) having been reported from all parts of the Colony. Many of the reports refer to swarms of very large size. Towards the end of the month large swarms invaded the Colony from Northern Rhodesia flying southward.

Swarms have continued to haunt the region of the eastern border, where they have constituted a serious threat to early crops and grazing, as well as to plantations and have appreciably influenced farming operations.

The direction of flight within the Colony to the end of the month has shown no definite trend. There has as yet been no indication of a southward pre-breeding migration from the Colony.

Ovaries are now developing in the females, whilst the males appear sexually to be almost fully developed and in some parts are beginning to change colour. From the behaviour of the insects on the eastern border, it appears possible that the swarms at present infesting that region may remain to lay. Apart from the larger and denser swarms, the locusts here are scattered over a wide area, flying aimlessly about. The males in this region are definitely changing colour.

Enemies and Diseases:

No records. All specimens examined have appeared to be quite healthy, and there have been no reports of avian or other enemies concentrating on the swarms.

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(1) Communication from the official correspondent of the Institute, Mr. Rupert W. Jack, Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

Damage:

Some damage to citrus plantations, early maize and grazing has been reported from various parts of the Colony.

Preparation for Anticipated Hopper Campaign:

Preparations are well forward for the anticipated campaign against hoppers. All pumps have been overhauled and further supplies are on order for early delivery. A supply of arsenite of soda powder equal to that used during the last season's campaign has already been provided and further supplies can be obtained if necessary.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Algeria. — The Decree of 11 October, 1934 relative to the importation into Algeria of fresh fruits coming from countries infested with San José scale (*Aspidiotus perniciosus*), adds Portugal to the the list of contaminated countries. (*Journal Officiel de l'Algérie*, Alger, 26 octobre 1934, 8e année, nº 43, p. 722).

Germany. — According to paragraph 4 of the Ordinance of 14 August, 1934 new regulations have been established relative to the quality of seed potatoes.

The following indications give the percentage in weight of the maximum rate of diseased, injured or mis-shapen potatoes which will be permitted without a diminution in the price.

Alterations: Will be permitted when they do not diminish the value of the potatoes for planting (yellow marks in the inside, green tubers, slight injuries, slight attacks of common potato scab [*Actinomyces*], etc.); merchandise will be considered exempt from common potato scab if the marks do not cover more than 5 % of the surface of the tuber.

Serious injuries (diminishing the value of the tubers for planting): 1,5 % for selected potatoes, 2 % for ordinary merchandise.

Diseases, exceptions are made for wet rot (tubers showing symptoms of disease or found diseased when cut open): 1 % for selected potatoes, 2 % for ordinary merchandise.

Wet rot: ¼ % at the place of expedition; 2 % immediately after arrival at the place of destination.

Damage produced by frost: Damage incurred in transport, even if the seller has taken the necessary precautions, will not be indemnified.

If the alterations exceed the limits indicated above the purchaser has the right to a reduction in price. He can, however, refuse to accept the merchandise if the alterations exceed the following limits:

Serious injuries: Selected potatoes 3 %, ordinary merchandise 6 %.

Diseases: Selected potatoes 2 %, ordinary 4 %.

Wet rot and frost-bitten potatoes: At the place of expedition 1 %; immediately after arrival at the place of destination 3 %.

Finally, all signs of wart disease [*Synchytrium endobioticum*] give the right to refusal of the consignment. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. November 1934, Bd. VI, Nr. 7, S. 121-124).

*** By Ministerial Notification of 20 October, 1934, it is permitted, by abrogation of the dispositions of 17 July, 1934 concerning the use of highly poisonous products [see this *Bulletin*, 1934, No. 11, p. 247], to employ for the control of *Hylobius abietis* arsenical washes; the content in arsenic, however, should not exceed 1 %. (*Ibid.*, 1. Dezember 1934, Nr. 8, S. 148).

*** The provisions adopted on 24 October, 1934 by the Corporation of Agriculture (' Reichsnärstand ') concerning the planting of varieties of potatoes non-resistant to wart disease [*Synchytrium endobioticum*] establish that these varieties will be inspected for the last time in 1940. They can then be put on the market for the last time for the season 1941. Exceptions can be made for potatoes for planting intended for export.

Varieties non-resistant to wart disease and recognised as valuless for the agriculture of the country can be abolished before the end of the term indicated above. (*Ibid.*).

Germany (Prussia). — By Ordinance of the Governor of the province of Hanover, dated 23 August, 1934, relative to the control of asparagus fly [*Platyparaea poeciloptera*] and rust [*Puccinia asparagi*], the Ordinance of 10 October, 1932 [see this *Bulletin*, 1933, No. 1, p. 10] has been abrogated. This Ordinance has been replaced by local Ordinances of the presidents of the government districts of Hildesheim (22 September, 1934), Hanover (31 August, 1934), Lüneburg (30 August, 1934), and Stade (1 September, 1934).

In these Ordinances it is prescribed that the stalks of asparagus should be cut each year so that the remaining part of the stalks left in the ground should not be more than 10 cm in length. This should be executed before 15 October for young plantings and before 1 December for plantings already in bearing. The parts cut off should be inmediately destroyed by fire. All parts of stalks remaining in the ground should be carefully re-covered with earth. It is forbidden to take the aerial portions of the plants outside the asparagus beds with the exception of the berries intended for seed. The berries must be gathered on the spot.

In cases where asparagus rust appears exceptionally early in the season, this work may be carried out earlier.

The ends of asparagus stalks left in the beds to mark the lines of plants should be removed in spring before 15 April and burnt on the spot.

The prescribed work must be carried out by owners and usufructuaries of asparagus beds.

All contraveners will be punished. In addition, the Police may order that the work should be carried out by other persons at the expense of those interested. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Dezember 1934, Bd. VI, Nr. 8, S. 154-155).

*** By Police Ordinance of 29 October, 1934, a general control of rats has been organised in Berlin. The operations lasted from 24 to 27 November, 1934.

The provisions concerning the application of this Ordinance oblige all owners or tenants of houses and lands, including directors of colonies of small holdings, to apply the officially recognised means of control during the time indicated in the Ordinance and to distribute them in sufficient quantities in all places habitually frequented by rats.

The names of 21 officially recognised preparations are given with the name of the maker. All these preparations have a squill [*Urginea scilla*] basis and are not sold without special permission. Each receptacle should be accompanied by detailed instructions for use and the seller of these preparations is obliged to deliver to the purchaser a certificate indicating the name and quantity of the product and the date of purchase. A model of this certificate is attached to the Ordinance. Persons interested may employ an officially recognised rat-catcher to purchase the means of control and to carry out the necessary work.

Immediately after the last day of control, all rat-holes should be carefully stopped up and the dead rats found either buried or burnt.

Police agents and all persons charged with the supervision of this work have free access to places where the means of control have been deposited. They can demand to be shown the certificate of purchase.

Free information bureaux have been established. (*Ibid.*, S. 151-154).

*** By Police Ordinance (undated) relative to the protection of fruit trees and bees in the greater part of the circumscription of Pomerania, owners of fruit trees are obliged to treat their trees each year before blossoming with carbolineum, the efficaciousness of which has been previously recognised officially and to follow this treatment after 3 days, at the earliest, by another treatment with a Bordeaux mixture at 1 or 2 % or with another officially recognised product.

The Police authorities will put the necessary instruments and apparatus at the disposition of persons interested on payment of a fixed charge. Proprietors having the necessary apparatus and staff expert in their use can receive premission to carry out the work themselves.

With regard to the protection of bees, it is forbidden to spray the blossom of fruit trees with arsenical preparations. Spraying of trees situated at less than 50 metres distant from the hives will be executed only in the evening and after agreement with the beekeepers. (*Ibid.*, S. 156).

Germany (**Baden**). — By Decree of 24 October, 1934 relative to the control of pests of fruit trees, it is prescribed that the trees should be pruned each year before 1 March, the dead branches removed and the wounds resulting from this

work carefully treated. All aged trees, those which on account of too heavy a crown cannot be cleared and all dead and dying trees should be cut down and removed.

All mistletoe [*Viscum*] plants should be removed, also mosses, lichens, caterpillar nests and splinters of old bark.

The local Police authorities, in accord with the local chief of the Corporation of Agriculture, will charge experts or Commissions with the work of seeing that these prescriptions are carried out.

The Police authorities will compel defaulters to execute the work considered necessary and if it is not carried out within the stated time the Police will have the work carried out at the expense of those interested. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Dezember 1934, Bd. VI, Nr. 8, S. 150).

Germany (Württemberg). — By Decree of 3 October, 1934 relative to the control of pests of fruit-trees, provisions have been adopted in Württemberg approximately analogous to those adopted in Baden by Decree of 24 October, 1934 [see this *Bulletin*, pp. 35-36]. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Dezember 1934, Bd VI, Nr. 8, S. 157).

French Colonies. — By Decree of the Minister of Colonies, dated 18 July, 1934, article 6 of the Ministerial Decree of 22 February, 1926 relative to the introduction of cotton seed into the French Colonies with a view to protection against the pink bollworm [*Platyedra gossypiella*], has been modified thus:—

' The regulations of the present Ministerial Decree are applicable to the products enumerated in article 1 intended for importation or transit through all the French Colonies except Madagascar, New Caledonia, French Equatorial Africa, Indo-China and the New Hebrides.

' The probitions contained in article 1 of the present Ministerial Decree are applicable to products coming from Egypt, the Anglo-Egyptian Sudan, Italian Somaliland, former German East Africa, British East Africa, Nigeria, Sierra Leone, Angola, Lagos, the Belgian Congo, Algeria, Tunis, Morocco, Zanzibar, Asia, Brazil, Mexico, Hawaii, the Solomon Islands, Australia, the British West Indies, Texas, Lousiana, New Mexico, and Greece '. (*Journal Officiel de la République Française*, Paris, 3 août 1934, LXVI[e] année, n° 181, p. 8011-8012).

Belgian Congo. — The Ordinance N. 29/Agri. of 9 March, 1934, which came into force on 1 June, 1934, includes insectivorous birds among the animals the hunting of which is forbidden throughout the whole Colony. (Royaume de Belgique. Ministère des Colonies. *Bullettin Agricole du Congo Belge*, Bruxelles, juin 1934, vol. XXV, n° 2, p. 299-307).

*** By Ministerial Decree No. 179 of 20 July, 1934, the locust invasions in the Province of Lusambo are declared to be a public calamity.

All occupiers or part occupiers of land where locust eggs have been laid and where hoppers and adults have appeared, are obliged to immediately advise the nearest territorial authority who will prescribe the following means of destruction: collection and destruction of eggs by fire; destruction of hoppers in ditches; collection and destruction of adults at dawn when the insects, made torpid by the dew, are unable to fly.

It is strictly forbidden to drive away the hoppers, to attempt to drive them away or permit them to be driven into neighbouring lands. (*Bulletin Administratif du Congo Belge*, Léopoldville-Kalina, 10 septembre 1934, 23me année, nº 17, p. 567-568).

Danzig (Free City of). — A phytosanitary Convention between the Free City of Danzig and Poland was signed on 5 August, 1934.

The Free City of Danzig will apply, within its territory, all regulations concerning the protection of plants which exist in Poland. The regulations which Poland will make in the future will be immediately followed by the application of identical regulations in the territory of Danzig and which will enter into force if possible on the same day as the Polish regulations. If the Free City of Danzig considers it necessary to take phytosanitary measures in a region not yet provided for by the Polish regulations, these measures should not impede trade between the two contracting countries.

Decisions arrived at following researches and given by the central institutions of the two countries will be recognised as reciprocally valid.

The Plant Protection Service of the Free City of Danzig will form part of the Plant Protection Service of Poland.

The two contracting parties engage to abolish all phytosanitary control in reciprocal trade on their frontiers. They also engage to respect the regulations in force in the two countries concerning the trade in plants and parts of plants.

This Convention will remain in force for two years and will be automatically renewed if notice is not previously given by one of the two parties. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. November 1934, Bd. VI, Nr. 7, S. 126-127).

Eritrea. — By Decree No. 7010 of 13 December, 1934, it is forbidden to import into Eritrea Cactaceae coming from all foreign countries with a view to protecting the cultivation of prickly pears [*Opuntia*] in the Colony against insects, fungi and bacteria hosts of foreign Cactaceae.

Foreign Cactaceae subsequently expedited to Eritrea will be seized by the Direction of Customs Services and destroyed, even if they are accompanied by certificates of health or origin, without payment of any indemnity. (*Bollettino Ufficiale del Governo dell'Eritrea*, Asmara, 15 dicembre 1934, anno XLIII, n. 23, pp. 589-590).

Spain. — By Decree of the Presidency of the Council of Ministers, dated 22 June, 1934, the regulation of exports, the inspection and control of same, determination of the qualities of the various products sent abroad, types of packages and everything regarding the conditions required for the despatch of merchandise outside the country, is under the control of the Ministry of Industry and Commerce and is carried out by means of the Direction General of Commerce and Customs and Excise.

Sanitary functions, such as the delivery of phytopathological certificates and health certificates for animal products, are under the control of the Ministry

of Agriculture and will be carried out by means of the technical Services dependent on the Direction General of Agriculture, Animal Husbandry and Animal Industries.

The said sanitary functions, when in respect to documents which have to accompany products destined for a country where contingents have been established relative to importation, will be subject to the exigencies of the corresponding internal regulations, the corresponding documents being delivered with the technical guarantees and by the competent officials, within the limits established by the Direction General of Commerce and Customs and Excise for such regulations. (*Gaceta de Madrid*, Madrid, 21 junio 1934, año CCLXXIII, tomo II, núm. 175, págs. 1928 y 1929).

*** By Decree of the Presidency of the Council of Ministers, dated 13 October, 1934, relative to the export of oranges and other citrus fruits to foreign markets, it is prohibited, *inter alia*, to export fruits which are damaged, frost-bitten, badly bruised or infested by pests such asc piojo rojo ' [*Chrysomphalus dictyospermi*], ' piojo negro ' [*Parlatoria zyzyphi*], ' serpeta ' [*Lepidosaphes pinnaeformis*] ' negrilla ' [*Pleosphaeria citri*], or other parasites. (*Ibid.*, 16 octubre 1934, tomo IV, núm. 289, págs. 362 a 367).

*** By ' Orden ' of 13 November, 1934, phytosanitary or phytopathological inspection has been made compulsory for oranges and other citrus fruits intended for export, in accordance with the dispositions in the Decree of 13 October, 1934, and as a special guarantee for importing countries.

The phytopathological inspection will be carried out by the officially authorised agronomy engineers of the National Phytopathological Service, who will deliver the corresponding certificate conforming to the model agreed upon by the international Conventions or to the special exigencies of the importing countries.

The phytopathological certificate will be independent from other documents necessary for exportation and the said certificate will contain no notifications other than those of the Inspector of the National Phytopathological Service.

The Customs Offices will not despatch nor authorise the expedition of oranges or any other citrus fruits which are not accompanied by the corresponding certificate of phytopathological inspection. (*Ibid.*, 14 noviembre 1934, núm. 318, pág. 1285).

France. — A Presidential Decree of 12 October, 1934, reads as follows:—

Art. 1. — The Commissioner of the Republic in the territory of Cameroon is authorised to issue, in Executive Council and on the advice of the Chamber of Agriculture, Decrees rendering compulsory the upkeep of plantations and the pruning of trees and shrubs, and ordering the cutting and destruction of diseased and superfluous plants, the collection and burning of fruits and parts of plants attacked by disease, and the spraying with fungicides and insecticides of all plantations requiring such sanitary measures.

Art. 2. — The supervision of plantations for their protection against diseases and for the application of prescribed sanitary measures is carried out by the auxiliary officers of the ' Procureur ' of the Republic and the officers of the Agricultural Service, sworn in for this purpose.

Art. 3. — On information received from one of the above mentioned officers a Commission, on which European and native planters will be represented, will verify the existence of diseases and will given advice on the necessary measures to be taken to prevent the spreading of the diseases and to the curative treatment that is to be applied.

Art. 4. — Infractions of Decrees issued in conformity with Art. 1, will be punished by a fine of 50 to 2 000 francs for Europeans, and which, in the case of a second offence, can be increased to 5 000 francs. For natives the penalties under native legislation will be applied. Those who, on account of local regulations cannot be judged according to native legislation, will be brought before the native tribunal of the first grade.

Art. 5. — In the case of defaulting planters, the Administration can, at the expense of those interested, undertake all the operations provided for in Art. 1, also the work of protection against the diseases prescribed for by the Decrees issued in conformity with this Decree without prejudice to the penalties provided for in Art. 4.

Art. 6. — Article 463 of the penal code may be applied. (*Journal Officiel de la République Française*, Paris, 23 octobre 1934, LXVI[e] année, n° 249, p. 10631-10632).

*** The Ministerial Decree of 16 October, 1934, applies to seeds of wheat and oats for sowing and to potatoes for planting the regulations contained in the Decree of 16 November, 1932 which establishes a catalogue of the species and varieties of cultivated plants. According to Article 3 of the said Ministerial Decree only those potato growing associations will be approved by the Minister of Agriculture which are admitted to the phytopathological inspection of crops instituted by the Inter-ministerial Decree of 13 April, 1934 [see this *Bulletin*, 1934, No. 6, p. 129].

The foreign associations exercising phytopathological inspection in the field and who desire to import selected potatoes into France should, to be approved, send an application to the Ministry of Agriculture together with all regulations, certificates, marks and other documents proving they are capable of efficiently exercising this inspection. The list of foreign associations which have been approved will be published each year by the 'Office de Renseignements agricoles' of the Ministry of Agriculture. (Ministère de l'Agriculture. Direction de l'Agriculture. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 1[er] novembre 1934, année 1934, n° 21, p. 471-472).

*** By Ministerial Decree of 30 October, 1934, a Commission is instituted at the Ministry of Agriculture, charged with studying the problems relative to the use of toxic substances for the control of parasites, insects and animals injurious to agriculture. (*Journal Official de la République Française*, Paris, 1[er] novembre 1934, LXVI[e] année, n° 257, p. 10945).

*** The Committee of seed-control of the Ministry of Agriculture has established a catalogue of species and varieties of potatoes and oats cultivated in France up to 1 October, 1934. In this catalogue are specified the

potatoes which are resistant and non-resistant to wart disease [*Synchytrium endobioticum*]. (Ministère de l'Agriculture. Direction de l'Agriculture. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 15 janvier 1935, année 1935, nº 2, p. 40-42).

*** A notice to exporters of potatoes to Switzerland establishes that consignments of tubers of French origin should be accompanied by a certificate of origin in conformity with the model reproduced in the said notice and stating that the land on which they were gathered, also neighbouring land within a radius of 5 kilometres, is free from wart disease [*Synchytrium endobioticum*]. (*Journal Officiel de la République Française*, Paris, 13 décembre 1934, LXVIe année, nº 292, p. 12200).

Italy. — By Ministerial Decree of 30 September, 1934, owners of vineyards in the province of Piacenza are grouped in a syndicate of viticulture according to the terms of the Law No. 987 of 18 June, 1931 [see this *Bulletin*, 1931, No. 9, p. 166] containing enactements relating to the protection of cultivated plants and agricultural products against diseases and pests and to the services relating thereto. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 21 novembre 1934, anno VI, n. 27, p. 5132).

*** By Royal Decree-Law No. 2025 of 10 December, 1934 liquid hydrocyanic acid for use in the control of scale insects of citrus trees will be imported for a limited time free of customs duties and with a reduction in the tax on the exchange up to an amount of 600 kilos per annum. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 24 dicembre 1934, anno 75º, n. 301, pp. 5825-5826).

Syrian Republic. — In view of the spreading in Lebanon of grape phylloxera [*Phylloxera vastatrix*], the president of the Republic of Syria, by Decree No. 2551 of 25 June, 1934, has strictly prohibited the importation into Syria of fresh grapes coming from Lebanon and packed in cases containing vine leaves. (*Journal Officiel de la République Syrienne*, Damas, 30 juin 1934, 16me année, nº 12, p. 132).

Switzerland. — By Ordinance of the Federal Department of Public Economy, dated 24 November, 1934, the certificate of origin, provided for in article 1 of the Decree of the Federal Council of 5 October, 1925, concerning the control of wart disease of potatoes [*Synchytrium endobioticum*], will also be required for consignments of potatoes coming from France, as from 15 December, 1934. (*Recueil des Lois Fédérales*, Berne, 28 novembre 1934, nº 39, p. 1401).

Tunis. — By Decree of 15 October, 1934, the measures laid down by Decree of 26 July, 1932 [see this *Bulletin*, 1933, No. 1, p. 14] for the prevention of the introduction of San José scale (*Aspidiotus perniciosus*) are applicable to consignments coming from Portugal. (*Journal Officiel Tunisien*, Tunis, 23 octobre 1934, 52e année, nº 88, p. 2244).

*** By Decree of 18 October, 1934, owners or tenants, on any terms, of rural property are obliged to undertake the destruction of starlings [*Sturnus vulgaris*] at their own expense from 1 October to 1 March of each year. The destruction will be carried out by every means, such as shooting, traps, nets, etc. (*Ibid.*, 30 octobre 1934, nº 90, p. 2277).

*** By Decree of 20 October, 1934, the list of plant and animal parasites dangerous to crops [see this *Bulletin*, 1933, No. 1, p. 14] and to which are applicable the measures contained in the Decree of 11 July, 1932 [see this *Bulletin*, 1932, No. 12, pp. 208-210], is completed thus:—

I. — Plant Parasites.

Neocosmospora vasinfecta or bayoud (date palm). (*Ibid.*, 6 novembre 1934, nº 92, p. 2338).

Yugoslavia. — By Ministerial Decision No. 80684/II, dated 4 December, 1934, the importation of living plants or parts of living plants from all countries declared, or which will be declared, infested by San José scale (*Aspidiotus perniciosus*) is forbidden as from 1 January, 1935. Underground parts of plants and seeds of all kinds are not included in this prohibition. The provisions of the Regulation apply to the importation of potatoes and fruits. (*Službene Novine*, Beograd, 14 detsembra 1934, godina XVI, broj 289-XXXVII, strana 1165).

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This book on *Uredinales* is written with two principales objects. One object has been to produce a work to be serviceable in the determination of the rusts by the general botanist and the other has been to present a classification showing the relationship of species and genera as consistent with the actual state of knowledge permits.

The geographical area covered is that of Greenland, Newfoundland, Canada and the continental United States of America, including Alaska and the Aleutian islands. One hundred and twenty-eight subtropic species which invade the United States of America along its southern border are also included in the Manual.

According to the classification adopted, the majority of *Uredinales* are divided into two families: *Melampsoraceae* (with the tribes *Pucciniastreae*, *Cronartieae*, *Melampsoreae* and *Phakopsoreae*) and *Pucciniaceae* (with the tribes *Ravenelieae*, *Phragmidieae* and *Aecidieae*). A chapter follows entited 'Form-genera' including the genera *Aecidium*, *Peridermium*, *Caeoma*, *Uraecium* and *Uredo*.

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The title of the book has now been slightly modified and the matter revised and brought up to date with the most recent information by the author himself and two of his collaborators at the Station, Dr. M. Staehelin and Mr. P. Bovey. The work is divided into two parts.

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